

OLQ Geological Services
Technical Memorandum
January 8, 2003

**Non-Purge Sampling
for
Hydrocarbon Monitoring Wells**

Background

The Office of Land Quality, Science Services Branch, evaluated studies on well purging and sampling, and conclude that a non-purging sampling methodology will provide comparable results to purged hydrocarbon samples, with a significant saving in time, money and waste generated (see the Geological Services Technical Memorandum of May 27, 1998). If the two methods vary at all, hydrocarbon analytical results from non-purged samples tend to be slightly higher than purged samples, which will result in a more conservative remediation. Accordingly, this non-purging method can be used as an option for monitoring hydrocarbons, if the conditions outlined below are met. These requirements may be modified in the future, as additional information is acquired.

Conditions for Utilizing the Non-Purge Option.

- 1) The method can be utilized only for wells used to monitor hydrocarbons: BTEX and MTBE. It cannot be used for metals, DNAPLS or other pollutants.
- 2) It can be utilized only in unconfined aquifers.
- 3) The monitoring well must be properly constructed (at least two inches in diameter) and developed (Indiana Water Well Drilling Rules 312 IAC 12), and the water table must be below the top of the well screen.
- 4) The monitoring well cannot contain free product or a visible sheen.
- 5) If dedicated bailers are used, they cannot be stored within the well.
- 6) If a site closure is requested on a site that has been monitored by non-purge sampling, the final sampling event shall include both purged and non-purged samples from each well.
- 7) The sampling methodology and procedures must be detailed in the sampling section of each corrective action plan and progress report. The procedures must be approved by the IDEM

site manager before non-purge sampling commences. A separate table must be provided in each monitoring report, listing the screen depth and current water level of each monitoring well, to show that fluctuations have not raised the water table above the well screens. If water is above the screened interval, purged samples are required for that well.

This technical memorandum will be updated as new information is acquired. Please contact Steven Poe of Geological Services at (317) 234-0992 if you have questions concerning the non-purge methodology.